

Patent Claims

1. Procedure for the release and isolation or release and detection of nucleic acids from biological compartments of a sample comprising the following steps:
 - A sample is incubated in a sample processing vessel with magnetic particles that can bind with the biological compartments while the sample processing vessel is shaken,
 - A magnet is positioned near the vessel so that the magnetic particles are held against the vessel wall,
 - The resultant fluid is removed from the vessel
 - The magnetic particles are resuspended in a second fluid by
 - a) moving the magnet away from the vessel so that the magnetic particles are no longer held against the vessel wall while
 - b) the vessel is shaken,
 - The biological compartments are lysed and a lysis mixture is created,
 - The lysis mixture is warmed,
 - The mixture is cooled under conditions that make it possible to isolate or hybridize the nucleic acids to be isolated or detected.

2. Procedure based on Claim 1, characterized by the fact that the nucleic acids are not removed from the vessel during the steps described.
3. Procedure based on Claim 1, characterized by the fact that the steps described take place within one reaction block.
4. Procedure based on Claim 1, characterized by the fact that the magnetic particles are larger than $2.8 \mu\text{m}$.
5. System for the release and isolation of nucleic acids from a suspension of biological compartments with magnetic particles containing the following components:
 - a receptacle for sample vessels (10, 100) for holding one or more sample processing vessels (A),
 - a thermostat unit (20) to maintain the sample processing vessels (A) and their contents at a constant temperature,
 - a mechanical shaker (30) to shake the sample processing vessels (A),
 - a separation device (40) for separating and depositing the magnetic particles on a wall of each sample processing vessel (A) by means of magnetic force,coupled together in a coordinated fashion.

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6. System based on Claim 5, characterized by the fact that it also contains a pump unit (50) to remove fluid from the sample processing vessel (A).
7. System based on Claim 5 or 6, characterized by the fact that the separation device (40) and the receptacle for holding sample vessels are positioned in such a way that they can be moved towards or away from each other.
8. System based on Claim 5, characterized by the fact that the sample processing vessels (A) have an outlet (A11) at the bottom that is or can be connected with a suction device.
9. System based on Claim 5, characterized by the fact that it holds a number of sample processing vessels (A).
10. System based on Claim 5, characterized by the fact that the receptacle for sample vessels (10, 100) is moved by means of an eccentric drive within a plane that is basically vertical to the axis of the sample processing vessel or vessels.
11. System based on Claim 5, characterized by the fact that the thermostat unit contains a resistance heating unit and a peltier element.
12. System based on Claim 5 in which the sample processing vessels and the cavities have matching conicity.

Added
A3

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amended claims

5. System for the release and isolation with magnetic particles containing the following units:
 - a) a receptacle for sample vessels (10, 100) for holding one or more sample processing vessels (A),
 - b) a thermostat unit (20) to maintain the sample processing vessels (A) and their contents at a constant temperature,
 - c) a mechanical shaker (30) to shake the sample processing vessels (A),
 - d) a separation device (40) for separating and depositing the magnetic particles on a wall of each sample processing vessel (A) by means of magnetic force,

coupled together in such a coordinated fashion that the units described in a), b), and d) are integrated in one reaction block.